

Title (en)  
ENGINE

Title (de)  
MOTOR

Title (fr)  
MOTEUR

Publication  
**EP 2532846 A1 20121212 (EN)**

Application  
**EP 11739781 A 20110202**

Priority  
• JP 2010023605 A 20100204  
• JP 2010023604 A 20100204  
• JP 2011052146 W 20110202

Abstract (en)

An engine (1) provided with a valve timing change mechanism (37) capable of changing the timing of closure of the air intake valve (16). The valve timing change mechanism (37) is provided with a cam shaft (90), a first cam (91) and a second cam (92) which are provided to the cam shaft (90), a first swing arm (50) with which the first cam (91) is in contact and which rocks as the first cam (91) rotates, a second swing arm (60) with which the second cam (92) is in contact and which rocks as the second cam (92) rotates, a push rod (70) which is connected to the first swing arm (50) and causes the first swing arm (50) and the air intake valve (16) to cooperate with each other, and a switchover means (100) which can switch between a first state in which the first swing arm (50) is caused to rock in response to the rotation of the first cam (91) and a second state in which the first swing arm (50) together with the second swing arm (60) is caused to rock in response to the rotation of the second cam (92).

IPC 8 full level

**F01L 13/00** (2006.01); **F01L 1/14** (2006.01); **F01L 1/18** (2006.01); **F01M 9/10** (2006.01); **F02D 13/02** (2006.01); **F02D 15/00** (2006.01)

CPC (source: EP KR)

**F01L 1/14** (2013.01 - KR); **F01L 1/146** (2013.01 - EP); **F01L 1/18** (2013.01 - EP KR); **F01L 1/267** (2013.01 - EP); **F01L 13/00** (2013.01 - KR);  
**F01L 13/0036** (2013.01 - EP); **F01M 9/101** (2013.01 - EP); **F02D 13/02** (2013.01 - KR); **F02D 13/0226** (2013.01 - EP); **F02D 15/04** (2013.01 - EP);  
**F01L 2013/0089** (2013.01 - EP); **F02B 37/00** (2013.01 - EP); **Y02T 10/12** (2013.01 - EP)

Cited by

DE102013006304A1

Designated contracting state (EPC)

AL AT BE BG CH CY CZ DE DK EE ES FI FR GB GR HR HU IE IS IT LI LT LU LV MC MK MT NL NO PL PT RO RS SE SI SK SM TR

DOCDB simple family (publication)

**EP 2532846 A1 20121212; EP 2532846 A4 20130918; EP 2532846 B1 20150408;** CN 102753791 A 20121024; CN 102753791 B 20141112;  
KR 101392511 B1 20140507; KR 20120106885 A 20120926; WO 2011096433 A1 20110811

DOCDB simple family (application)

**EP 11739781 A 20110202;** CN 201180008218 A 20110202; JP 2011052146 W 20110202; KR 20127020726 A 20110202